

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A sensor array system for detecting the position of an object or energy source, comprising:

a cylindrical object having a curved surface;

a plurality of sensors arranged around a circumference of the cylindrical object, each having a limited field of view that

(i) extends along a length of the curved surface, and such that

(ii) each of the plurality of sensors is capable of detecting an object or energy source that is positioned within its field of view,

wherein the fields of view of at least some of the sensors overlap the fields of view of other sensors, the overlapping fields of view defining unique spatial regions along the curved surface of the cylindrical object; and

a data acquisition system, operatively connected to said plurality of sensors for determining which sensors simultaneously detect an object or energy source, thereby determining the unique spatial region, along the curved surface of the cylindrical object, in which the object or energy source is located,

wherein the system is designed to function as a hit detector for detecting hit flash plume on said curved surface of said cylindrical object, and

wherein, for at least one of the plurality of sensors:

said field of view extends along the length of the curved surface in a direction that is substantially perpendicular to a radius or curvature  $r$  of the cylindrical object, wherein  $l$  denotes the length of the curved surface;

said hit flash plume has a plume height  $p$  within said field of view; and

said field of view has a half-angle  $\theta$  in accordance with:

$$\theta = \tan^{-1} \left\{ \frac{\sqrt{(r+p)^2 - r^2}}{l} \right\}.$$

2. (cancelled)
3. (cancelled)
4. (original) The sensor array system of claim 1, wherein said plurality of sensors comprises sensors capable of transmitting and receiving electromagnetic energy.
5. (original) The sensor array system of claim 1, wherein said plurality of sensors comprises fiber optic light sensors.
6. (canceled)
7. (previously presented) The sensor array system of claim 1, wherein said circumferentially arranged plurality of sensors includes first and second groups of sensors, said first group of sensors having a more narrow field of view than said second group of sensors.
8. (cancelled)
9. (currently amended) The sensor array system of claim 1, wherein at least one of said plurality of fields of view extends along the length of the curved surface in a direction that is substantially perpendicular to a ~~the~~ radius of the cylindrical object.
10. (currently amended) The sensor array system of claim ~~6~~ 1, wherein said cylindrical object is a portion of a missile.
11. (canceled)

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Reply to Office action of Oct. 24, 2003

**Amendments to the Drawings:**

The attached sheet of drawings includes changes to Figures 2 and 3. This sheet, which includes Figures 2 and 3, replaces the corresponding original sheet including the same Figures. The changes to the figures have been indicated in red on the attached sheet entitled, "Annotated Sheet Showing Changes."